

REMARKS/ARGUMENTS

Upon entry of this Amendment, claims 27-51 will be unchanged and remain pending. Accordingly, the application currently presents twenty-five (25) total claims, of which two (2) are in independent form (claims 27 and 40). For any fees which are deemed necessary following submittal of this Amendment, the undersigned hereby authorizes such fees to be charged to our deposit account, Deposit Account No. 061910.

Double Patenting Rejections

Claims 27-51 stand rejected under the judicially-created doctrine of obviousness-type double patenting. The double patenting rejection is acknowledged. However, as claims 27-51 are further rejected under U.S.C. 103(a), as described below, and since the conflicting claims 1-22 of copending Application No. 10/538,529 have not in fact been patented, Applicants choose to hold off on addressing the double patenting rejections for the time being and instead only address the 103(a) rejections herein. Applicants respectfully traverse the rejections of claims 27-51 under the judicially created doctrine of obviousness-type double patenting. However, if Applicants' arguments herein are found to overcome one or more of the standing 103(a) rejections, Applicants are willing to consider advancing prosecution of this Application by filing a terminal disclaimer in compliance with 37 CFR 1.321(c) to subsequently overcome the double patenting rejections.

Claim Rejections under 35 U.S.C. 103(a)

Under 35 U.S.C. 103(a), Examiner currently rejects (i) claims 27-43, 45, 47, and 51 as being unpatentable over Quan et al. (U.S. Pat. No. 4,794,217) ("Quan") in view of Berkman et al. (U.S. Pat. No. 3,980,854) ("Berkman"); (ii) claim 44 as being unpatentable over Quan in view of Kaeppeler et al (WO 02/38838) using U.S. Patent 7,048,802 as an English Translation ("Kaeppeler '838"); (iii) claims 46, 48, and 49 as being unpatentable over Quan in view of Kaeppeler et al. (WO 02/38839) ("Kaeppeler '839"); and (iv) claim 50 as being unpatentable over Quan in view of Kordina et al. (U.S. Patent 5,695,567) ("Kordina").

Following an initial review of the above rejections, Applicants noted a number of issues. First, on page 2, at the bottom of the page, it appears the top portion of the paragraph is missing, consequently making it difficult to understand the full scope of the corresponding rejection. In addition, at the bottom of page 2, Examiner uses “anticipatory” language with respect to Quan, which appears to be erroneously applied in light of the corresponding 103(a) rejection. Second, claims 44, 46, and 48-50 all ultimately depend from claim 27. Accordingly, because the Examiner uses the Berkman reference in his rejection of claim 27, it should follow that the 103(a) rejections of claims 44, 46, and 48-50 would need to similarly cite Berkman to be valid.

Applicants appreciated the courtesy of Examiner to discuss the above issues by phone on May 8, 2008. With respect to the missing text on page 2, Examiner stated that the text had been mistakenly cut off and should have reflected that which was previously indicated in the prior non-final Office Action dated October 10, 2007 regarding the teachings of Quan. In addition, Examiner confirmed that the rejection on page 2 was indeed an obviousness rejection in spite of the use of “anticipatory” language with respect to Quan. Finally, Examiner agreed that each of the rejections of claims 44, 46, and 48-50 should all further be made in view of Berkman, thereby including Berkman in the rejections. In light of these issues in the Action, Examiner indicated that Applicants could either (i) request a further Action be issued with each of these issues remedied, or (ii) respond to this Action in light of the Examiner’s expressed clarifications. If Applicants chose the latter alternative, and if the entered arguments were found to be not persuasive, Examiner indicated that he would consider issuing a further non-final Office Action in turn. Accordingly, Applicants choose to respond to this Action and respectfully traverse the 103(a) rejections with respect to the pending claims.

Response to Rejections

In the previous Office Action dated October 10, 2007, claim 27 of the instant application was rejected under 102(b) as being anticipated by Quan. In their response filed January 31, 2008, Applicants argued the rejection, noting a variety of distinctions between the susceptor system of Quan and the system required by claim 27. In doing so, among other items, Applicants argued that no teaching or suggestion could be gathered from Quan that either one of its susceptor plates 8 is “hollow so as to have at least one through hole which extends in a longitudinal direction”, as is required in claim 27. At the top of page 3 of the current Action,

Examiner now acknowledges that Quan fails to show a hollow susceptor. Accordingly, Examiner uses the teaching of Berkman, in combination with Quan, in forming an obviousness rejection with respect to claim 27.

Regarding the 35 U.S.C. 103(a) rejection of claim 27, even if, arguendo, Applicants agree with Examiner that Berkman discloses a graphite susceptor with a hollow portion, the similarities with the presently claimed invention of claim 27 would be found to be limited to such a feature. In particular, after thoroughly reviewing the teachings of Berkman, Applicant has found the hollow susceptor to be vastly different from Applicant's described susceptor, both in construction and application. For example, Applicants finds the susceptor 50 taught by Berkman to have the form of a truncated pyramid which is adapted to be placed inside the treatment chamber (col. 5, lines 9-13). To the contrary, in the instant application, a portion of the outer surface of at least one susceptor element is suitable for acting as a wall of the treatment chamber (for example, see Figures 1-5, last full paragraph on page 4, and claim 27).

Consequently, the susceptor systems of Berkman and of Applicant's claimed invention represent two completely different manufacturing geometries and philosophies. This is further confirmed by the teaching of Berkman that the susceptor 50 must be closed, in order to prevent reacting gases from flowing therein (col. 5, lines 60-65). In contrast, by designing the susceptor to have through-holes, as in the embodiments of Figures 1-5, gases are enabled to flow in the holes, thereby enabling detachment of particles from the internal walls of the holes and serving to modify the temperature of the susceptor system (see, for example, first full paragraph on page 11).

Furthermore, Berkman does not expressly explain the reason why the taught susceptor 50 must be hollow; however, it appears that such hollow structure has the purpose of allowing heat shields 88 to be placed on the inner surfaces 69-74 of the susceptor 50 itself (col. 5, lines 34-40). To the contrary, because of its structure, the presently claimed susceptor does not provide for the presence of separate heat shields; consequently, the skilled artisan would be less likely to apply the teaching of Berkman to the susceptor of the instant application.

Finally, as Applicants expressly describe in the third full paragraph on page 7, one reason for having at least one hole extending in a longitudinal direction, is to confine induced currents to the peripheral region and therefore necessarily flow very close to the treatment chamber.

Berkman is completely silent about such a technical problem, and consequently, about its solution.

In summary, Examiner has expressly stated that Quan does not show a hollow susceptor, and in turn, uses Berkman specifically for its teaching of a hollow susceptor. However, in light of the above reasons, Applicants respectfully submit that one skilled in the art, would not be logically drawn to combine the teachings of Berkman with Quan as suggested by the Examiner in his rejection of claim 27.

In reviewing the other cited art from Examiner's 35 U.S.C. 103(a) rejections, the art does not seem to address the above-described deficiencies with respect to Quan or Berkman. For example, Kaeppeler '838 is used, regarding susceptor systems, for its presumed teachings (i) to provide grooves and/or ribs in a piece of an upper wall and/or a piece of a lower wall for joining with pieces of side walls and (ii) to provide a first refractory and thermally insulating structure which surrounds the susceptor system and is constituted substantially by a tube of high-porosity graphite. In addition, Kaeppeler '839 is used, regarding susceptor systems, for its presumed teachings (i) to provide a recess and disc in a susceptor and (ii) to provide a through hole used as a means to transport gas through the susceptor. Further, Kordina (U.S. Pat. No. 5,695,567) is used, regarding susceptor systems, for its presumed teachings to use a SiC coating on the susceptor walls.

Accordingly, Applicant asserts that upon entry of this Amendment, the claims are hereby in condition for allowance. For the above reasons, Applicants believes claim 27 should be allowed. In turn, the allowance of claim 27 thereby renders 28-39 also allowable. The allowance of claim 27 shall also render claim 40 allowable, as claim 40 has all the same features of claim 27. In turn, the allowance of claim 40 thereby renders claims 41-51 also allowable. Favorable consideration and prompt allowance of the application are respectfully requested.

Conclusion

Applicant believes that no new matter will be introduced by entry of these amendments and that the amendments are fully supported by the specification and application as a whole.

In light of the above, Applicant respectfully submits that the present rejections should be withdrawn and prompt allowance of this application is respectfully requested. If the Examiner

feels that prosecution of the present application can be materially advanced by a telephonic interview, the undersigned would welcome a call at the number listed below.

Respectfully submitted,



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